

53. The method according to Claim 52, further including the step of
noting said rotated position of said lever handle as an indication that said
latchbolt is unlatched.

REMARKS

By the above Amendment, apparatus Claims 1, 13, 19, 25, 37, 40 and 41 have been amended; and new Claims 44-53 have been added, of which Claims 46-53 are drawn to a method of installing a door lock apparatus to a door. Submitted herewith is a copy of the amended claims marked up to show the changes in accordance with 37 C.F.R. §1.121(c).

A check in the amount of \$132.00 is enclosed, to cover the fee for the claims added by this Amendment, calculated as noted on the attached Fee Determination Record. If the enclosed fee is deficient in any manner, please charge any such deficiency to Deposit Account No. 23-0822.

No new matter has been added by the above Amendment. Claims 1-21, 23-33 and 35-53 are pending in this application.

By the Office Action dated January 31, 2003, the examiner has rejected Claims 1-8, 13-21, 23-33 and 35-43. Applicants traverse these rejections and request reconsideration of this application, applicants respectfully submitting that Claims 1-8, 13-21, 23-33 and 35-43, as amended above, and added Claims 44-53, are patentable over the references cited by the examiner, for the reasons discussed below.

Claims 9-12 have been indicated as allowable by the examiner, if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants request that such rewriting in independent form be held in abeyance, since it is applicants' position that the rejected base claim as amended above is patentable over the references of record.

Applicants and their attorney thank Examiner Gall for his courtesies and assistance during a telephone interview with applicants' attorney on January 29, 2003. During that interview, the various features of applicants' invention were discussed in relation to the cited references, and in particular the patents to F.E. Best et al., Shin, Berger et al., Wu, and Nehls.

Claim Rejections – 35 U.S.C. §112

Claims 37, 41 and 42 have been rejected under 35 U.S.C. §112, second paragraph, the examiner noting deficiencies in antecedent bases. By the above Amendment, Claim 37 has been amended to depend from Claim 36, and Claim 41 has been amended to depend from Claim 13, thereby correcting the deficiencies as to these claims.

With respect to Claim 42 (which is dependent from Claim 25), Claim 25 recites “a lock in said handle” and “a rotated position”, providing the antecedent bases for “said lock in said handle” and “said rotated position” in dependent Claim 42.

Applicants submit that Claims 37 and 41, as amended, and Claim 42, comply with the requirements of 35 U.S.C. §112, second paragraph, and respectfully request that these §112 rejections be withdrawn.

The examiner’s objection to Claim 19 has been corrected by the above amendment to Claim 19, correcting the spelling of “rotatably” and “rotatable” (lines 13 and 15, respectively, in Claim 19 as amended above).

Claim Rejections – 35 U.S.C. §102

Amended Claims 1-3, 5, 19-21 and 23.

Claims 1-3, 5, 19-21 and 23 stand rejected under 35 U.S.C. §102 (b) as being anticipated by F.E. Best et al. (U.S. Patent No. 1,811,110).

The examiner has noted, both in the Office Action (top of page 3) and during the telephone interview, that all of the components of Best *including the door* are secured together, with the door of Best being “regarded as part of a securement means between the lock body and trim plate”.

Applicants’ apparatus does not utilize the door for securing the cylindrical lock’s lock body to the trim plate. Rather, in applicants’ invention, the lock body is secured to the trim plate *independently of the door* – i.e., without the door being a part of a securement means between the lock body and the trim plate. Moreover, in applicants’ apparatus, the cylinder lock is secured to that same trim plate, also independently of the door; both the cylindrical lock’s lock body and the cylinder lock are secured to the same trim plate independently of the door.

In F.E. Best et al., the lock body 15 and the cylinder lock 16 are not secured to a trim plate independently of the door, the examiner having stated (during the telephone interview) that

F.E. Best et al. shows all three components secured together by the door, i.e. that the securement together of these three components is dependent on the door.

The securing together of the cylindrical lock's lock body and the cylinder lock to the same trim plate (or pull plate, see dependent Claims 5 and 23) *independently of the door* significantly increases the structural integrity of the door lock apparatus. Of comparable practical importance, the secured-together combination – i.e. the combination of these three components secured together independently of the door – facilitates installation and removal of the door lock apparatus. The lock body secured to the outside trim or pull plate inwardly thereof with the cylinder lock secured to that outside trim or pull plate, comprise an integral structure or unit facilitating installation onto the door (see applicants' specification at page 14 lines 17-19) and facilitating secured removal from the door (see specification at page 20 lines 5-7).

By the above Amendment, independent Claims 1 and 19 have been amended to recite that the cylindrical lock's lock body with its spindle extending therefrom is secured to the trim plate independently of the door, and further that the housing of the cylinder lock is secured to that trim plate independently of the door. As discussed above, these claim limitations are neither disclosed nor suggested in F.E. Best et al., and applicants submit that twice amended Claim 1 (as well as Claims 2, 3 and 5 depending therefrom) and twice amended independent Claim 19 (as well as Claims 20, 21 and 23 depending therefrom) are not anticipated by F.E. Best et al. and are patentable thereover.

Claim Rejections – 35 U.S.C. §103

Claims 4-6, 23 and 24

Claims 4, 5 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over F.E. Best et al. in view of Roy (3,698,217); and Claims 6 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over F.E. Best et al. in view of the Photograph of a door pull manufactured by Triangle Brass Manufacturing (applicants' assignee herein).

Claims 4, 5, 6, 23 and 24 ultimately depend from and contain all of the limitations of twice amended Claim 1 or twice amended Claim 19 shown above to patentably distinguish over the primary reference F.E. Best et al. There is no suggestion or incentive in F.E. Best et al., or in Roy, or in the Triangle Brass door pull Photograph, that would lead one of ordinary skill in the

art to secure the pull plate of either Roy or Triangle Brass – independently of the door – to both a cylindrical lock's lock body and a cylinder lock as claimed in applicants' twice amended Claims 1 and 19. Applicants submit that Claims 4, 5 and 23 are each patentable over F.E. Best et al. in view of Roy, and that Claims 6 and 24 are each patentable over F.E. Best et al. in view of the Triangle Brass door pull Photograph.

Claims 7, 8, 31, 32, 39, 40 and added Claims 44 and 45

Claims 7, 8, 31, 32, 39 and 40 have been rejected under 35 U.S.C. §103(a) as being unpatentable over F.E. Best et al. in view of Shen (5,970,760) or Berger et al. (5,457,975).

Neither of the disclosures of Shen or Berger et al. make up for the deficiencies of F.E. Best et al. discussed above; specifically, neither of these combinations of references suggest a trim plate to which is secured both the cylindrical lock's lock body and a cylinder lock, both securements being independently of the door, as recited in applicants' twice amended Claims 1 and 19. Applicants submit that Claims 7, 8, 31, 32, 39 and 40, as well as added dependent Claims 44 and 45, ultimately dependent from base Claims 1 or 19, patentably distinguish over F.E. Best et al. in view of Shen or Berger et al.

Applicants further submit that dependent Claim 39 and added dependent Claim 44 include further grounds of patentability over their twice amended base Claim 1. The supporting plate 40 of F.E. Best et al. (referred to by the examiner as an attachment plate) does not secure the cylindrical lock's lock body of F.E. Best et al. to the door trim plate 41, but instead secures only the cylinder lock 16 to the trim plate 41. Similarly, the housing 11 and seat 12 of Shen are concerned with the cylinder lock, as is the mounting plate 40 of Berger et al. To modify the apparatus of F.E. Best et al. in accordance with the disclosure of either Shen or Berger et al. would still result in an attachment plate securing a cylinder lock – but *not* a cylindrical lock's lock body – to a door trim. Accordingly, applicants submit that dependent Claim 39 wherein the attachment plate secures the cylindrical lock's lock body to the trim plate as well as securing the cylinder lock (intermediate dependent Claim 7) is patentable over F.E. Best et al. in view of either Shen or Berger et al.; Claim 40 is dependent from Claim 39. Added Claim 44 (dependent from twice-amended Claim 1) recites that the attachment plate is secured to the trim plate independently of the door, and that both the cylindrical lock's lock body and the cylinder lock housing are

secured to the attachment plate independently of the door, structure which applicants submit patentably distinguish over F.E. Best et al. in view of either Shen or Berger et al.; added Claim 45 is dependent from Claim 44.

Claims 13-18, 25-30, 41 and 42

Claims 13-18, 25-30, 41 and 42 have been rejected under 35 U.S.C. §103(a) as being unpatentable over F.E. Best et al. in view of Foshee (4,424,691) and either Wu (6,145,358) or Nehls (2,418,044); see the examiner's Interview Summary, paper No. 10.

Claims 13-18, 25-30, 41 and 42, being dependent from twice amended base Claims 1 or 19 submitted above to be patentable over the primary reference F.E. Best et al., are accordingly patentable over F.E. Best et al. in view of the cited secondary references. Moreover, applicants submit that these claims have further grounds of patentability.

In the preferred embodiment of applicants' door lock apparatus, the cylindrical lock has a normally bolt-latched position, an actuated bolt-unlatched position, and a locked bolt-unlatched position. It is the *locked bolt-unlatched* position capability of applicants' cylindrical lock apparatus that is the claimed subject matter of applicants' Claims 13-18, 25-30, 41 and 42.

This feature is not shown in Foshee; instead, Foshee locks the cylindrical lock handle in a *bolt-latched* position; in Foshee, the spindle notch and the chassis plate notch are in radial alignment only when the spindle is in its unrotated position *latching* the latchbolt (see Foshee FIG. 4 and column 3 lines 18-48). Both Wu and Nehls are concerned with deadbolt apparatus where the bolt-unlatched positions are not locked.

With respect to Wu, the examiner's statement that "Wu teaches locking a handle in either a bolt-locked or unlocked position utilizing elements 23 and 41, as set forth on page 2, lines 52-65." Applicants respectfully submit that the examiner's statement appears to be inaccurate; instead, it appears that element 23 is not locked but may be manually retracted when the latchbolt is in either of its bolt-latched or bolt-unlatched positions. Moreover, as stated by Wu at column 3 lines 11-13, "Accordingly, latching or unlatching can be achieved by means of directly turning the thumb turn 3 without previously lifting of the control plate 23."

Applicants' dependent Claims 13 and 25 recite a holdback apparatus in the cylindrical lock apparatus including a handle lock for *locking* the cylindrical lock spindle when the spindle is in a

rotated position *unlatching* the latchbolt. Claims 14 and 26, which depend from Claims 13 and 25 respectively, recite that the handle is a lever handle in a rotated position when the spindle is locked with the latchbolt unlatched. This feature of applicants' invention recited in Claims 14 and 26 has the advantage of permitting the lever handle to act as a visual indicator that the holdback feature is engaged, an indication which of importance in public applications and of particular importance in school applications. Claims 41 and 42 depend from Claims 13 and 25 respectively, and recite that the handle lock is key actuatable for locking and unlocking the spindle when the spindle is in a rotated position unlatching the latchbolt. This key actuation feature permits secured control of the holdback feature for the cylindrical lock, so that the holdback feature in public applications may be implemented or defeated only by authorized personnel.

Claims 15 and 27, depending from twice amended independent Claims 1 and 19 respectively, require that the chassis plate notch and the spindle notch are in radial alignment when the spindle is in a rotated position *unlatching* the latchbolt, whereupon the lock is operable for moving the radially extending member along the two radially aligned notches for locking the spindle against rotation when the latchbolt is *unlatched*. This differs from Foshee, in which the spindle notch and the chassis plate notch are in radial alignment only when the spindle is in its unrotated position *latching* the latchbolt, as discussed above. This condition of Foshee is unaffected by either Wu or Nehls, wherein there is no teaching or suggestion of *locking* the bolt in a bolt-unlatched position, also as discussed above. There is no teaching, suggestion or incentive in the primary reference or in any of the three secondary references that would lead one of ordinary skill in the art to angularly displace the chassis plate notch of Foshee for providing locking of the spindle when the latchbolt is unlatched. Claims 17 and 18 depend from Claim 15, Claims 28 and 29 depend from Claim 27, and Claim 30 depends from Claim 29.

Accordingly, applicants respectfully submit that Claims 13-18, 25-30, 41 and 42 are patentable over Best et al. in view of Foshee and either Wu or Nehls.

Claims 35, 37 and 38

Claims 35, 37 and 38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Foshee in view of either Wu or Nehls.

The cylindrical lock apparatus of applicants' Claim 35 requires that the chassis plate notch and the spindle notch are in radial alignment when the spindle is in a rotated position *unlatching* the latchbolt, whereupon the handle lock is operable for moving the radially extending member along the two aligned notches for *locking* the spindle against rotation when the latchbolt is *unlatched*. As previously discussed, in Foshee the spindle notch and the chassis plate notch are in radial alignment only when the spindle is in its unrotated position *latching* the latchbolt. Wu and Nehls have been discussed and distinguished above; there is no teaching, suggestion or incentive in either Wu or Nehls that would lead one of ordinary skill in the art to angularly displace the chassis plate notch of Foshee for providing locking of the spindle when the latchbolt is *unlatched*, as recited in applicants' Claim 35. Accordingly, applicants respectfully submit that Claim 35, and Claims 37 and 38 depending therefrom, are patentable over Foshee in view of either Wu or Nehls.

Claim 36

Claim 36 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the "modified" Foshee reference as applied by the examiner to Claim 35, and further in view of either Storlie et al. (4,095,445) or Kester et al. (5,794,472).

Applicants have discussed above the patentability of Claim 35 over Foshee in view of either Wu or Nehls (i.e., the "modified" Foshee reference). Claim 36, being dependent from Claim 35, is accordingly patentable over such references further in view of the lever handle teaching of either Storlie et al. or Kester et al. Further, applicants submit that the lever handles of either Storlie et al. or Kester et al. do not function in the same manner as does the lever handle of applicants' Claim 36 which recites that applicants' lever handle is angularly disposed when the radially extending member is captured by the spindle notch, such angular disposition of the lever handle being a visual indicator that the latchbolt is unlatched. The two sets of notches in Storlie et al. each lock the handle in a bolt-latched position. The various rotated positions of the lever shown in Kester et al. appear to show movement of the unlocked handle and of an over-torqued locked handle with latched latchbolt; Kester et al. does not appear to show a locked handle in an angular disposition (or a rotated position) locking the latchbolt in an unlatched position. The lever handles of Storlie et al. and Kester et al. do not function as a visual indicator that the latchbolt is

unlatched. Applicants submit that the subject matter of Claim 36 is patentable over the combination of Foshee, Wu, Nehls, Storlie et al., and/or Kester et al.

Claims 33 and 43

Claims 33 and 43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over F.E. Best et al. in view of Foshee and either Wu or Nehls.

Claim 33 recites a lock in the cylindrical lock's lever handle for locking the lever handle in an angular disposition, the angular disposition of the lever handle being a visual indicator that the latchbolt is unlatched. As discussed earlier, the respective teachings of Foshee, Wu and Nehls do not suggest the *locking* of a cylindrical lock handle in a *bolt-unlatched* position; nor does the teaching of F.E. Best et al. Also as discussed above, the angular disposition of the locked lever handle as a visual indicator that the latchbolt is unlatched is an advantage in public applications and of particular importance in school applications, and is not suggested by the cited references. Claim 43 recites that the lock in the handle of Claim 33 is key-actuable for locking the lever handle in the angular position when the latchbolt is unlatched. Such key-actuation feature permits secure control of the holdback feature for the cylindrical lock, so that the holdback feature in public applications may be implemented or defeated only by authorized personnel. Applicants submit that Claim 33, as well as Claim 43 depending therefrom, are patentable over Best et al. in view of Foshee and either Wu or Nehls.

Added Method Claims 46-53

As previously discussed, an important aspect of applicants' invention is the securing together of a cylindrical lock's lock body and a cylinder lock to the same trim plate (or pull plate). During installation of applicants' door lock apparatus to a door, installation is facilitated by installing the secured-together trim plate, lock body and cylinder lock to the door by securing the trim plate to the outside of the door. By the above Amendment, applicants have added Claims 46-53 drawn to a method of installing a door lock apparatus to a door. Claims 46-48 find support in applicants' specification such as at page 11 line 13 through page 16 line 8, and in the drawings particularly FIGs. 1, 2 and 4; and Claims 49-53 find support in the specification such as at page 20 line 18 through page 24 line 8, and in the drawings particularly FIGs. 1, 10 and 17.

The added method claims comprise independent Claim 46 and dependent Claims 47-53. Applicants submit that each of these claims is patentable over the references of record considered either separately or in combination.

Specifically, independent Claim 46 sets forth method steps of providing the various components of applicants' door lock apparatus, and includes the step of securing the cylindrical lock's lock body with the recited spindle extending therefrom and securing the cylinder lock to the trim plate with the cylinder lock's cam coupled to the lock body's retractor, and the step of installing the secured-together trim plate, lock body and cylinder lock to the door by securing the trim plate to the outside of the door with the retractor coupled to the already installed latchbolt. Since F.E. Best et al. requires the door itself to act as a securing means for the lock body, the cylinder lock and the trim plate, the method steps of applicants' Claim 46 of securing these components together and then installing the secured-together plate, lock body and cylinder lock to the door by securing the trim plate to the door are neither suggested nor taught by F.E. Best et al. Accordingly, applicants submit that method Claim 46 is patentable over F.E. Best et al., as are Claims 47-53 depending therefrom.

Further, with respect to dependent Claim 47, the discussion above regarding Claim 5 as concerning Roy and the Triangle Brass door pull Photograph pertains as well to Claim 47; specifically, there is no suggestion or incentive in F.E. Best et al., or in Roy, or in the Triangle Brass door pull Photograph, that would lead one of ordinary skill in the art to secure the pull plate of either Roy or Triangle Brass to both a cylindrical lock's lock body and a cylinder lock and then to install the secured-together trim plate, lock body and cylinder lock to the door by securing the trim plate to the outside of the door.

Similarly, applicants' above discussion concerning dependent Claims 39 and 44 are applicable to dependent method Claim 48, in which the securing step includes securing both the cylinder lock and the lock body to an attachment plate. Applicants therefor submit that Claim 48 is patentable over F.E. Best et al. in view of Shen or Berger et al.

Dependent method Claim 49 provides a lock in the cylindrical lock handle for locking the spindle when the spindle is in a rotated position unlatching the latchbolt. The discussion above concerning Claim 13 is applicable as well to Claim 49, and applicants submit that Claim 49 as

well as Claims 50-53 depending therefrom are patentable over F.E. Best et al. in view of Foshee and either Wu or Nehls.

Dependent method Claim 52 includes the steps of rotating the lever handle to a rotated position to unlatch the latchbolt, and locking the handle lock in such rotated position; dependent Claim 53 further includes the step of noting the rotated position of the lever handle as an indication that the latchbolt is unlatched. Applicants' discussion above concerning Claims 14 and 33 is applicable as well to method Claims 52 and 53. Accordingly, applicants submit that method Claims 52 and 53 are patentable over F.E. Best et al. in view of Foshee and either Wu or Nehls.

In view of the foregoing, applicants submit that all pending claims in this application patentably distinguish over the references of record, considered both separately and in combination, and that the application conforms with the requirement of 35 U.S.C. §112. Applicants respectfully request that the rejections be withdrawn and that a Notice of Allowance be issued as to Claims 1-21, 23-33 and 35-53.

Respectfully submitted,



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Amended Claims Marked Up
Pursuant to 37 CFR 1.121(c)

1. (Twice amended) A door lock apparatus, comprising the combination of:
 - a trim plate securable to the outside of a door;
 - a cylindrical lock [assembly] apparatus including a latchbolt, a lock body [secured to said trim plate inwardly thereof and] having a retractor for said latchbolt, a spindle inwardly extending from said lock body and coupled to said retractor for unlatching said latchbolt upon rotation of said spindle, and a handle [secured] securable to said spindle for rotating said spindle;
 - a cylinder lock including a housing and a cylinder actuable for rotation in said housing, [said cylinder lock secured to said trim plate and outwardly extending from said lock body;] and a cam secured to said cylinder and rotatable therewith;
 - [a cam secured to said cylinder and rotatable therewith, said cam coupled to said retractor for unlatching said latchbolt upon rotation of said cylinder.]
 - said lock body with said spindle extending therefrom secured to said trim plate independently of the door and inwardly of said trim plate; and
 - said housing of said cylinder lock secured to said trim plate independently of the door and outwardly extending from said lock body, and with said cam coupled to said retractor for unlatching said latchbolt upon rotation of said cylinder.

13. (Amended) The apparatus according to Claim 1, further including:

a hold-back apparatus in said cylindrical lock [assembly] apparatus including a lock in said handle for locking said spindle when said spindle is in a rotated position unlatching said latchbolt.

19. (Twice amended) A door lock apparatus, comprising the combination of:

a door trim securable to a face of a door;

a cylindrical lock [assembly] apparatus including a latchbolt, a lock body having a retractor for said latchbolt, a spindle extending from a first side of said lock body and coupled to said retractor for unlatching said latchbolt upon rotation of said spindle, and a handle [secured] securable to said spindle for rotating said spindle;

a cylinder lock including a housing and a cylinder actuable for rotation in said housing, said cylinder lock extending from a second side of said lock body opposite said first side;

a cam secured to said cylinder and rotatable therewith, said cam coupled to said retractor for unlatching said latchbolt upon rotation of said cylinder; and

said cylinder lock secured to said door trim independently of the door with said cylinder [rotably] rotatably actuable from one side of said door trim, and said lock body secured to said door trim independently of the door with said [handle rotatable] spindle rotatable from another side of said door trim opposite said one side.

25. (Amended) The apparatus according to Claim 19, further including:

a hold-back apparatus in said cylindrical lock [assembly] apparatus including a lock in said handle for locking said spindle when said spindle is in a rotated position unlatching said latchbolt.

37. (Twice amended) The apparatus according to Claim [35] 36,

wherein

said lock in said lever handle includes a bored lock cylinder having a rotatable tail piece;

and further including

a rotational-to-translational motion converter carried by said spindle for converting rotation of said tail piece to longitudinal movement of said member.

40. (Amended) The apparatus according to Claim 39, wherein:

said opening in said attachment plate and said opening in said trim plate are configured [to] for facilitating outward withdrawal of said cylinder lock with said key inserted in said cylinder lock.

41. (Amended) The apparatus according to Claim [1] 13, wherein:

said lock in said handle is key actuatable for locking and unlocking said spindle when said spindle is in said rotated position unlatching said latchbolt.